Marco Vela Koentarjo

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https://mvelak.github.io

Education

The Pennsylvania State University — State College, PA
Bachelor of Science in Computer Science — *Aug. 2023 – May 2027*
Bachelor of Science in Mathematics — *GPA: 3.48*

- **Selected Coursework**: Data Structures & Algorithms, Object-Oriented Programming, Systems Programming, Modern Web Development, Linear Algebra, Numerical Analysis I & II, Combinatorics, Probability Theory

Professional Experience

IT Assistant — August 2022 – June 2023
Perkiomen Valley High School — *Collegeville, PA*

- Collaborated with team to share insights and pool together knowledge to diagnose and resolve Chromebook software and hardware issues
- Assisted team members in the installation of electronic devices throughout school building

Personal Projects

Social Media Marketing Web App | *Python, Django, React* — December 2024

- Developed a web application utilizing Django Rest Framework for backend APIs and React for front-end user interfaces, improving system scalability and user experience
- Designed and built RESTful APIs using DRF to power social media marketing tools, including automation features, analytics dashboards, and content management systems

Football Ticket Web Scraper | *Python, Flask, SQL* — October 2024

- Developed a full-stack web application which allowed users to find the cheapest football ticket available
- Utilized the BeautifulSoup library to scrape ticket data from the Penn State Student Ticket Exchange and store it in a SQL database

Gradient Whiteboard | *Java, Swing* — September 2024

- Developed a Java application which allowed users to draw on a digital whiteboard with gradient colors
- Utilized the Swing package to create a practical GUI in order to enhance user experience

Two Dimensional Particle Simulation | *Python, NumPy, PyGame* — July 2024

- Developed a Python application which simulated the collision of balls in a closed space
- Improved performance by a significant margin with the use of a spatial hash
- Utilized the NumPy library to accurately calculate collisions through linear algebra manipulation

School Involvement

· Quantitative Finance Club
· Association for Computing Machinery
· MLPSU
· DevPSU

Technical Skills

Languages: Python, Java, C, HTML/CSS/JS, SQL, Matlab
Frameworks: Django, React, Flask
Developer Tools: Git, Jetbrains Suite, VSCode
Libraries: NumPy, Pandas, Swing